CAPSTONE

EXAMINING THE EFFECTS OF THE CONTRACEPTIVE COVERAGE ESSENTIAL MANDATE ON UNINTENDED PREGNANCY RATES PRE- AND POST-IMPLEMENTATION OF THE AFFORDABLE CARE ACT

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Abstract

The purpose of this study is to determine the effect of the Affordable Care Act's essential benefit of contraceptive coverage on the rate of unintended pregnancies nationwide. With the passage of the Affordable Care Act (ACA), state-sponsored and most private or group insurance plans are required to fully cover contraceptive devices prescribed by a provider. Data from the 2011-2013 and 2013-2015 waves of the National Survey of Family Growth (NSFG) allow me to examining changing patterns of contraceptive use before and after the implementation of the ACA. This study uses regression analysis to compare study variables affecting contraceptive usage in relation to unintended pregnancy. With implementation of the ACA occurring in late 2012 for some plans, and full implementation in January 2013, this study compares the effects of the early years of the mandate. The findings suggest that implementation of the ACA has affected a decrease in the unintended pregnancy rate by increasing access to Medicaid coverage, thus increasing access to prescription contraception, particularly for women of lower socio-economic status in education, race and income.

Problem

Unintended pregnancy remains a public health and economic concern in the United States. Unintended pregnancy (UP) is defined as a pregnancy which is considered unwanted or mistimed. The most current data has unintended pregnancy declining, yet it remains a significant problem accounting for 45% of all pregnancies (Wind, 2016). The reduction of unintended pregnancies has the possibility to reduce adverse health consequences for both mother and child, while also lessening the financial burden to US taxpayers. "Annual medical costs of UP in the United States were estimated to be $4.6 billion" (Trussell et al., 2013). Unintended pregnancies create even greater financial and societal barriers for women and families in low-income and

under-served populations. "Poor women had more than five times as many unintended pregnancies as higher-income women. And women of color were roughly twice as likely to experience an unintended pregnancy as white women" (Wind, 2016). Removing out-of-pocket costs for contraceptives is seen as essential but insufficient in addressing UP. Educating women and providers on options and proper usage for the most effective contraceptive method is also viewed as a possible deterrent to unintended pregnancy. “95% of unintended pregnancies occur among women who either use their method inconsistently or incorrectly or use no method at all” (Kavanaugh and Jerman, 2018).

Because the ACA was so recently implemented, research on the contraceptive mandate and the reduction in unintended pregnancy is in its early stages. Earlier NSFG studies found the UP rate to be 51% over 2006-2010, falling to 45% over 2009-2013. This study will provide an analysis of the most recent NSFG compilation data sets in order to shed light on how the mandate is affecting the UP rate nationwide, and what are some of the influential factors concerning this issue.

Literature Review

In the late 1990’s and early 2000’s, there was generally widespread prescription contraception coverage in the private and public sector. Yet coverage was not free of charge and varied considerably between states. In order to study unintended birth outcomes where contraception coverage was inconsistent across states, Johnston and Adams (2017) used data from 1997 to 2012 to compare women in states that adopted prescription contraceptive coverage between 2000 and 2008 to those in states that did not. Their study focused on understanding the effects of prior contraception mandates at the state level in order to make a determination as to the effects created by the ACA’s mandate, particularly on unintended pregnancies. They

concluded that mandated coverage among privately insured women was associated with a 1.58 percentage point reduction in the probability of unintended birth in the first year of implementation, and a 1.24 percentage point reduction in the second year. “When used correctly, contraceptives are effective at preventing pregnancy; an estimated 12 million pregnancies are averted annually by consistent contraceptive use” (Johnston and Adams, 2017). This supports the idea that the ACA’s essential mandate of prescription contraceptive coverage is a viable policy to decrease the rate of unintended pregnancies. It also supports the conclusions from past studies that preventing unintended births leads to “broader health, social, and economic benefits for women and their families” (ibid).

Finer and Zolna (2014) arrived at similar conclusions in their study which utilized NSFG data up to 2010, with 2008 as the reference year. In 2008, 51% of pregnancies were unintended. There was a large disparity in rates by income level, with poor women—those below 138% of the Federal Poverty Level—having five times the rate of UP than women in the highest income category. Disparities also existed when comparing educational attainment and race, with women who did not graduate high school and women of color having significantly higher rates of UP, twice the rate of high school graduates and white women, respectively. Unintended pregnancies were found to have negative public health and economic impacts. Births related to UP were associated with adverse maternal and child health outcomes including delayed pre-natal care, premature birth and negative physical and mental health effects for the child; total nationwide public expenditures on UP were estimated to be $21 billion in 2010 (Guttmacher Institute, 2012). Pre-ACA, there was clearly a problem of unintended pregnancy. Finer and Zolna emphasized the need to address the problem not only through public health, but also by addressing fundamental social inequities in income and education. These pre-ACA studies added to the “body of

evidence indicating that reducing financial barriers to contraception is a successful policy tool for reducing the share and number of unintended births in the United States. As the contraception coverage requirement in the ACA is much more comprehensive than those previously implemented by states, it is likely to have a larger effect on decreasing unintended births than the findings presented here, particularly among women who had limited access to contraception prior to the ACA" (Johnston and Adams, 2017).

Hill (2012) provided context for the inclusion of the contraceptive mandate in the ACA. An August 2011 decision by the Department of Health and Human Services led to the adoption of the Institute of Medicine's (IOM) recommendation that all new private health plans must cover the full range of FDA approved contraceptive options along with preventative care for women. This recommendation was the basis in creating the ACA policy removing the cost barrier to contraceptive access, supporting previous data that showed removing cost increased contraceptive usage among all women. The IOM considered contraceptive care as a "medical necessity" and an "essential health benefit" for women's healthcare, noting that birth control is not only the most commonly taken drug in America by young and middle-aged women, but also assists in reducing overall health costs which include unintended pregnancies and their accompanying adverse health effects. Further support for inclusion of the contraceptive mandate was noted by Gunja et al. (2017) finding that in 2012 only 34% of privately insured women with individual policies had birth control coverage in their plan, with 62% of employer coverage including contraceptive benefits. With the implementation of the ACA, the number of uninsured women 19-64 years old in the United States had fallen by nearly half since 2010, from 20% to 11% of the population. "Women with low incomes have made particularly large gains: uninsured rates for those with incomes below 200% of the federal poverty level…fell from 34 percent in

2010 to 18 percent in 2016" (Gunja et al., 2017). As coverage increased, the contraceptive essential mandate created the opportunity for an increased number of women to access prescription contraception.

Bearak and Jones (2017) compared the use of contraceptive methods in Fall 2012 to Spring 2015, 29 months after health care reform implementation. Their results show that ACA implementation created substantial increases in rates of insurance coverage and fewer women making copayments for contraception. However, no change in patterns of contraceptive use was found among women at risk of unintended pregnancy. Although their conclusion showed a lack of evidence supporting a change in unintended pregnancies, the authors believed it "is possible that there will be a gradual shift toward more effective contraceptive methods as more women gain coverage and become aware of the availability of no-cost contraception and as health care systems adjust to meet increased demand for services."

Finer and Zolna (2016) updated their 2014 study focusing on the disparities for women at risk, specifying that rates for women below the federal poverty level were two times the national average. They established the importance of studying the unintended pregnancy rate as a central measure of reproductive health, arguing that reducing the rate provided clear public health benefits. Finer and Zolna emphasized the need for women who were at high risk for UP to be given access to free and highly effective methods of contraception to lower these rates, lending support to the ACA contraception mandate. Bearak and Jones (2017) reached a similar conclusion, arguing for continued monitoring of contraceptive use, as they saw the possibility it held for improving unintended pregnancy rates given a sharpened focus on the obstacles and motivations affecting decisions concerning contraception. Both studies observed that provisions of the ACA, such as the option for young adults up to 26 years old to stay on a parent's health

insurance plan, improved coverage of contraceptive methods, and obtaining contraception with no out-of-pocket costs had the potential to lead to greater overall use of birth control and increased availability and use of highly effective methods, supporting the continued decline of unintended pregnancy.

Several studies were completed in the years directly before and after the ACA contraception mandate went into effect, examining the effect of prescription contraception coverage from employer-sponsored insurance plans. Using data identifying women ages 18-45 with prescription drug coverage from employer-sponsored insurance for oral contraception during the period of 2010-2013 and no claims for such in the preceding 6 months, Pace et al (2016) examined the early impact of the ACA mandate eliminating cost sharing for oral contraception. An estimated 41% of UP occurs in women using contraception inconsistently. Oral contraception is the most commonly used method, but rates of nonadherence and discontinuation remain high with a failure rate of about 9%, increasing the likelihood of UP. Pace et al. concluded, "Since a significant proportion of unintended pregnancies in the United States occurs in women who are contraceptive users, and since the pill remains the most common contraceptive method, nonadherence among women seeking to avoid pregnancy is a critical public health concern." Earlier studies have shown that high out-of-pocket costs may contribute to inconsistent use. In their study, Pace et al. (2016) examined the relationship between cost sharing and discontinuation and nonadherence of oral contraception and found a modest early impact of the ACA on improving consistent use among women initiating their use.

Other studies focused on the financial implications for women due to the removal of cost sharing for prescription contraceptive coverage. Becker and Polsky (2015) used a large administrative data set from a national insurer and estimated out-of-pocket costs before and

after the mandate. They determined that the average percentage for out-of-pocket spending for oral contraceptive prescriptions and intrauterine device (IUD) insertions dropped by 20 percentage points after the ACA mandate implementation. They “estimated average out-of-pocket savings per contraceptive user to be $248 for the intrauterine device and $255 annually for the oral contraceptive pill. (Their) results suggest that the mandate has led to large reductions in total out-of-pocket spending on contraceptives and that these price changes are likely to be salient for women with private health insurance” (Becker and Polsky, 2015).

Tschann and Soon described the ACA mandate removing cost-sharing for prescription contraception coverage as a significant break-through for women. "The public health benefits of preventing unintended pregnancy are pronounced and well established. Every year in the United States, 600 to 700 women die because of complications associated with pregnancy, and the maternal mortality ratio in the United States continues to increase.” Unintended pregnancies continue to compound negative health and socio-economic outcomes including the delay or initiation of prenatal care, a decrease in breastfeeding, lack of spacing between pregnancies, and the inability to plan concerning finances, education and career (Tschann and Soon, 2015). Similar to Becker and Polsky, Tschann and Soon found significant cost savings, “Estimated cost savings in 2013 related to the contraceptive mandate was more than $483 million in out-of-pocket costs, an average of $269 per woman.”

Using a decision model developed from the employer perspective to simulate pregnancy costs and outcomes based on insurance coverage, Canestaro et al. (2017) found that denying full coverage for employee contraceptives resulted in an increase of 33 more unintended pregnancies per 1,000 women, with the greatest effect on unmarried women 20-29 years of age. "Private health plans may spend as much as $4.6 billion in costs related to unintended pregnancies each

year" (Canestaro et al., 2017). Their model supported the result that UPs increased when private insurance coverage for contraception was removed. They argued that increased utilization of employer-based insurance plans with no cost sharing for women seemed to be a successful method for decreasing the number of unintended pregnancies and avoiding additional employer costs due to such.

In a study using longitudinal data and a control group, Carlin et al. (2016) looked at the effect of eliminating the cost of contraception coverage under the ACA's essential mandate. The study found that women whose cost went to zero had an increase in choosing prescription contraception and showed a significant increase in the probability of that choice being a long acting reversible contraceptive method (LARC). “We found that the reduction in cost sharing was associated with a 2.3-percentage-point increase in the choice of any prescription contraceptive, relative to the 30 percent rate of choosing prescription contraceptives before the change in cost sharing. A disproportionate share of this increase came from increased selection of long-term contraception methods" (Carlin et al., 2016). Sonfield (2016) emphasized the effectiveness of allowing women to choose her own method, as those who are dissatisfied with their contraceptive choice are more likely to use it inconsistently, incorrectly or experience gaps in use. "And consistent use matters: the two-thirds of women at risk for unintended pregnancy who consistently and correctly use a method account for only 5% of unintended pregnancies" (Sonfield, 2016). Both Carlin and Sonfield argued that removing the cost barrier allowed women to choose these highly effective methods, serving to decrease the chance that a woman would experience an unintended pregnancy. Carlin et al.’s study suggested women are price sensitive to contraceptive choice, therefore future research was warranted to uncover whether the ACA mandate could reduce UP rates.

Further studies promoted increased access to and use of long acting reversible contraception (LARC) as having the potential to create a break-through in combatting UP. The FDA has currently identified 18 distinct methods of contraception, and ACA guidelines state that insurance plans must provide no-cost coverage for at least 1 type of each approved method. LARCs—which include IUDs and implants—are considered to be the most effective form of birth control but have high up-front costs. Fox and Barfield (2016) reported that previous studies have shown several plans subject to ACA requirements are not covering all 18, including some of the LARC methods. LARCs are particularly effective because they require no effort after being inserted, thus avoiding improper or inconsistent use. "When women are educated about LARC and provided with timely access, counseling, and follow-up without cost, they often choose and use these highly effective methods, which can be effective for 3 to 10 years, are associated with lower pregnancy rates, and may save insurers money over time" (Fox and Barfield, 2016). Trussel et al. (2013) used an economic model to evaluate the total costs of UP in the United States from a third-party health care payer perspective, and also explored the potential role of LARCs in reducing the number of UP. Their results showed the following: "Annual medical costs of UP in the United States were estimated to be $4.6 billion, and 53% of these were attributed to imperfect contraceptive adherence. If 10% of women aged 20–29 years switched from oral contraception to LARC, total costs would be reduced by $288 million per year."

Lindo and Packham (2017) utilized data from the Colorado Family Planning Initiative (CFPI) to explore the increased use of LARCs in reducing the rate of unintended pregnancies. The CFPI ran from 2009 to 2015 and was the first large-scale policy intervention program to promote and improve access to LARCs in America, with the primary goal of assisting women in

obtaining LARCs through Title X clinics. Availability of LARCs increased due to the ACA contraceptive mandate. Using a difference-in-difference design to compare counties with Title X clinics in Colorado receiving funding to those who did not, results of the $23 million program showed a significant reduction in unintended pregnancy rates by 40% among women aged 15-19 and 20% for those aged 20-24, with total costs avoided from adverse health effects estimated between $66.1 to $69.6 million (Colorado Department of Public Health and Environment, 2017). The study raised the importance of considering how expanded access to LARCs for all women would affect sexual activity and reproductive health. It also provided "useful insights into the effects of unintended pregnancies (or the prevention thereof) on long-run outcomes, such as educational attainment, earnings, and the use of social assistance programs" (Lindo and Packham, 2017).

In a recent analysis of the ACA mandate and the influence of LARC usage in reducing UP, Trussell (2018) provided an opposing view to earlier research. Trussell observed that LARCs are infrequently used by women in America, and although it would seem that the ACA mandate would have increased use of prescription contraception, as of yet no such effect has been found. The substantial decrease of out-of-pocket expenses has not influenced an overall shift to more effective methods. Since the most effective methods are so infrequently used in America, Trussell argued for three ways to address unintended pregnancy: “(1) decrease the proportion of women at risk for unintended pregnancy who use no method of contraception, (2) change the method mix among contraceptive users to greater use of the most effective methods, and (3) increase dual use of contraceptive methods” (Trussell, 2018). Trussell deems it most important to decrease the number of at-risk women who use no contraception than to focus on encouraging women to switch to more effective methods. His conclusions provide a challenging

perspective to the priorities of the majority of voices which promote a shift to LARCs as more effective in preventing UP as opposed to focusing on increasing contraception usage, no matter the method, for at-risk women.

Methodology and Data

This is a quantitative study to determine whether the ACA essential benefit mandate for contraceptive coverage has had an effect on decreasing the percentage of unintended pregnancies nationwide. Data will be utilized from the National Survey of Family Growth, compiled under the National Center for Health Statistics, a division of the Center for Disease Control. The NSFG gathers information on family life, pregnancy, fertility, use of contraception and general and reproductive health. The survey sample is designed to produce national data and is not intended to be applied to individual states. I will be utilizing two sets of data to capture pre-ACA and post-ACA timeframes, 2011-2013 and 2013-2015. The NSFG includes interviews of both women and men aged 15-44, but I will be focusing exclusively on the data collected for women. 5,601 women were interviewed from September 2011 through September 2013, and 5,699 women from September 2013 through September 2015. The variables of interest are race, age, marital status, mother's education level, birth control use and primary method, health insurance coverage and income level in relation to the Federal Poverty Level. I will be comparing study variables using regression analysis to determine the influence of the contraception mandate as it relates to the unintended pregnancy rate.

Results

Demographic variables were analyzed to ascertain statistical changes between values from the 2011-2013 to the 2013-2015 study. A weighted variable was utilized to adjust summaries of the sample population to accurately reflect the national population. To provide

validity of the samples across the two time periods, several demographic samples were compared using the weight. Similarities in percentages of groups were verified comparing race, age, marital status, education level of mother, work status, whether or not birth control was used in the last 12 months and income level.

The results show a basically unchanging percentage of women who used birth control in the last 12 months, 74.9% in 2011-2013, 74.8% in 2013-2015. The expectation would be to find increased usage in contraception given the ACA mandate of zero out-of-pocket expenditure for prescription birth control. A positive sign in the results is the overall decrease in percentage of poor and low-income women. The federal poverty level (FPL) is a measure of income issued each year by Health and Human Services to determine eligibility for certain aid programs and benefits. Poor is considered below 138%, the cut-off for receiving free health care (Medicaid) under the ACA, and low-income is considered between 138% to 200% of the FPL. From 2011-2013 to 2013-2015 the percentage of poor and low-income women decreased 2.8%, a desirable economic improvement since women with low socio-economic status are particularly at risk for unintended pregnancy (Appendix 1).

The results showed a significant decrease in the unintended pregnancy rate from 42.4% for 2011-2013 to 40% for 2013-2015. Women covered under Medicaid and the Children's Health Insurance Program (CHIP) increased by 2.7%, 17.2% to 19.9%, an overall change of almost 16% coverage. Results for method of contraception usage were mixed. Disregarding sterilization and abstinence, the top three methods of contraception involved the birth control pill, condoms and long acting reversible contraception. Oral contraception and LARCs are prescription methods, and while LARC usage increased by almost 19% overall, 7.5% to 8.9%, use of oral contraception dropped negligibly, 16% to 15.6% (Appendix 2).

Ideally one would want to see an increase in both forms of prescription contraception in order to support a decrease in the UP rate. Positive results for the ACA mandate would also point to Medicaid patients being more likely to use prescription contraceptive methods. In examining how likely it is that a woman using oral contraception had Medicaid, there is a slight uptick from 8.3% to 8.8%. LARCs show a more promising result; LARC usage increased from 6.6% to 10.3% in a similar comparison (Appendix 3).

Analysis

The implementation of the contraceptive coverage mandate has shown a positive effect in the fight against unintended pregnancy. Over the 2 NSFG studies, the relationship between those who experienced UP and were covered by Medicaid showed a decrease from 57.8% to 49.1%.

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. regress UP i.CURR_INS [aw=WGT2011_2013]
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UP	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
CURR_INS						
Currently covered by Medicaid, CH..	.2316619	.0217992	10.63	0.000	.1889215	.2744023
Currently covered by Medicare, mi..	.0641508	.0384299	1.67	0.095	-.0111964	.139498
Currently covered only by a singl..	.1324281	.0206711	6.41	0.000	.0918994	.1729568
_cons	.3461157	.0112398	30.79	0.000	.3240785	.3681529

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. regress UP i.CURR_INS [aw=WGT2013_2015]
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UP	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
CURR_INS						
Currently covered by Medicaid, CHI..	.1485376	.0204197	7.27	0.000	.1085017	.1885735
Currently covered by Medicare, mil..	.0697945	.0469671	1.49	0.137	-.0222913	.1618804
Currently covered only by a single..	.1279118	.0226379	5.65	0.000	.0835268	.1722968
_cons	.3416865	.0109329	31.25	0.000	.320251	.363122

An important focus of the mandate was to improve the ability of women who are at the greatest risk for unintended pregnancy—teens, those who did not graduate high school,

women of color and poor and low-income women—to access more effective prescription contraception. When comparing each individual risk group's usage, data shows that Medicaid increased usage of oral contraception and LARCs post-ACA for all groups, with the exception of teens using oral contraception.

Medicaid Insured Women-Contraception Usage Percentages

	Oral Contraception		LARCs	
	2011-2013	2013-2015	2011-2013	2013-2015
Age				
10-19 years	10.8	8.9	1.1	4.6
Education				
No HS	3.5	5	6.5	9.9
Race				
Black	5.6	6.1	4.6	9.2
Hispanic	4.1	4.6	8.8	11.5
FPL				
Poor	6.9	7.3	7	10.5
Low-income	9.3	11.7	5.6	9.2

When controlling for Medicaid coverage, education level, race and income level, the percentage of oral contraception and LARC usage also showed an increasing trend. In all cases but one—low-income Hispanic women with a high school education using oral contraception—a woman who was covered under Medicaid, had a high school education level or below, was Black or Hispanic and low-income or poor (below 200% of the FPL) showed an increased usage in oral contraception and LARCs (Appendix 4). While this does not show direct causation from increased use of prescription contraception, it does support the idea that increased access and use of more effective birth control methods can lead to less unintended pregnancy. These results underlie the importance of dealing with increased awareness and education of the use of prescription contraception and the potential to provide more effective contraceptive choices for women.

Comparing data pre- and post-ACA also shows growth in the number of poor and low-income women of all age groups and races covered by Medicaid, especially among Black women. Increased coverage supports women's access to reproductive health care and allows for improved health outcomes. Earlier results showed an 8.7% decrease in the UP rate for Medicaid insured women over the 2 study periods. Further exploration of the data points to a positive effect for women at risk of UP benefitting from Medicaid coverage and the ACA health mandates.

Percentage of Medicaid Insured Women*

		Poor		Low-income	
		2011-2013	2013-2015	2011-2013	2013-2015
Age(years)	Race				
10 to 19	Black	48.6	55.3	29.8	33.8
	Hispanic	42	43.9	23.2	23
	White	38.9	45.3	20.1	23.8
20 to 29	Black	41.9	49.6	23.1	28.1
	Hispanic	35.3	38.6	16.5	17.1
	White	32.2	39.6	13.4	18.1
30 to 39	Black	39.4	47.6	20.6	26.1
	Hispanic	32.3	36.6	14	15.1
	White	29.7	37.6	10.9	16.1
40 to 44	Black	36.2	46.7	17.4	25.2
	Hispanic	29.6	35.7	10.8	14.2
	White	26.5	36.7	7.7	15.2

*See Appendix 5

In examining the unintended pregnancy rate while controlling for education level, race, income level and Medicaid coverage, results are robust for decreasing the rate among poor and low-income women of all races who did not graduate high school (see table on page 16). The UP rate for poor Black women in this category went from 72.2% to 57.8%, Hispanic women 59.6% to 49.5% and White women 51.3% to 35.4%. For low-income women the rates were: Black,

67.9% to 57.9%, Hispanic, 55.3% to 49.6%, White 47% to 35.5%. Results for high school graduates showed a modest improvement in regards to reducing UPs. Since UP rates are higher among those with less education and lower incomes, the results from this particular measure provide an incentive for continuation of the contraception mandate as a tool to reduce UP.

	2011-2013 UP	2013-2015 UP
No HS	0.000	0.000
HS graduate	-0.001	0.073***
	(0.022)	(0.023)
Some college or 2-year degree	-0.003	0.046*
	(0.024)	(0.025)
Bachelor's or higher	0.057**	0.076***
	(0.026)	(0.027)
Average income and above	0.000	0.000
Low-income	0.067***	0.044*
	(0.025)	(0.026)
Poor	0.110***	0.043**
	(0.020)	(0.020)
MEDICAID	0.113***	0.067***
	(0.022)	(0.022)
White	0.000	0.000
Black	0.209***	0.224***
	(0.023)	(0.023)
Hispanic	0.083***	0.141***
	(0.023)	(0.023)
_cons	0.290***	0.244***
	(0.021)	(0.023)
N	3503	3476
R-squared	0.067	0.048

Standard errors in parentheses

* p<0.10 ** p<0.05 *** p<0.01

Conclusion

Unintended pregnancy has decreased in the years immediately after ACA implementation. The ACA allowed a greater number of women to access reproductive health services. The removal of out-of-pocket expenses has also benefited all women with insurance coverage, providing the opportunity to access more effective and efficient birth control without having to worry about cost. Barriers remain to access for women below 200% FPL, Black and Hispanic women, those without a high school education and teens, groups most at risk of unintended pregnancy. But comparing data from pre- and post-ACA, gaining Medicaid coverage and improving access for low income women and women of color has shown a distinct impact on the unintended pregnancy rate. There is also preliminary evidence that increased usage of prescription oral contraception and LARCs have the potential to be transformative in continuing to reduce UP. In this regard, policy recommendations to support decreasing UP include promoting the use of LARCs through education of women and providers, with a focus on understanding why LARCs are the most effective form of contraception and how they can be effectively utilized. A further recommendation would be to provide education for women who now have access to free contraceptive coverage about their choices, targeting women using methods improperly and those who are not using any method at all. This includes promoting policy that compels insurance companies to be in compliance and be held accountable for following the contraception mandate. The results of examining early years of post-ACA data suggest that education of and adherence to contraception prescription methods, which are now more readily available due to the prescription mandate, have the potential to be a highly effective tool in reducing unintended pregnancy.

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Appendices

1. . tab FPL [aw=WGT2011_2013]

FPL	Freq.	Percent	Cum.
Average income and above	2,768.4681	49.43	49.43
Low-income	766.758153	13.69	63.12
Poor	2,065.7737	36.88	100.00
Total	5,601	100.00	

. tab FPL [aw=WGT2013_2015]

FPL	Freq.	Percent	Cum.
Average income and above	2,974.3499	52.19	52.19
Low-income	674.571548	11.84	64.03
Poor	2,050.0786	35.97	100.00
Total	5,699	100.00	

2. . tab CONCMETHOD [aw=WGT2011_2013]

CONCMETHOD	Freq.	Percent	Cum.
Condom	527.927933	9.43	9.43
LARCs	422.5285606	7.54	16.97
Natural method	214.002489	3.82	20.79
No method used	914.29794	16.32	37.11
Non-user, no intercourse	1,062.6867	18.97	56.09
Other method	246.611492	4.40	60.49
Pill	894.14597	15.96	76.45
Sterilization/sterile	1,318.7989	23.55	100.00
Total	5,601	100.00	

. tab CONCMETHOD [aw=WGT2013_2015]

CONCMETHOD	Freq.	Percent	Cum.
Condom	509.44808	8.94	8.94
LARCs	508.528985	8.92	17.86
Natural method	358.2916802	6.29	24.15
No method used	978.851883	17.18	41.33
Non-user, no intercourse	1,059.4547	18.59	59.92
Other method	249.559214	4.38	64.29
Pill	887.168323	15.57	79.86
Sterilization/sterile	1,147.6971	20.14	100.00
Total	5,699	100.00	

3.

```
. regress Pill MEDICAID [aw=WGT2011_2013]
(sum of wgt is 60,887,363)
```

Source	SS	df	MS	Number of obs	=	5,601
				F(1, 5599)	=	51.87
Model	6.89750124	1	6.89750124	Prob > F	=	0.0000
Residual	744.506634	5,599	.132971358	R-squared	=	0.0092
				Adj R-squared	=	0.0090
Total	751.404136	5,600	.13417931	Root MSE	=	.36465

Pill	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
MEDICAID	-.093084	.0129243	-7.20	0.000	-.1184207	-.0677473
_cons	.1756099	.0053532	32.80	0.000	.1651155	.1861043

```
. regress LARC MEDICAID [aw=WGT2011_2013]
(sum of wgt is 60,887,363)
```

Source	SS	df	MS	Number of obs	=	5,601
				F(1, 5599)	=	1.46
Model	.102093798	1	.102093798	Prob > F	=	0.2264
Residual	390.551733	5,599	.069753837	R-squared	=	0.0003
				Adj R-squared	=	0.0001
Total	390.653827	5,600	.069759612	Root MSE	=	.26411

LARC	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
MEDICAID	-.0113248	.0093608	-1.21	0.226	-.0296755	.007026
_cons	.0773809	.0038772	19.96	0.000	.0697801	.0849818

```
. regress Pill MEDICAID [aw=WGT2013_2015]
(sum of wgt is 61,491,766)
```

Source	SS	df	MS	Number of obs	=	5,699
				F(1, 5697)	=	50.72
Model	6.61035651	1	6.61035651	Prob > F	=	0.0000
Residual	742.451696	5,697	.130323275	R-squared	=	0.0088
				Adj R-squared	=	0.0087
Total	749.062053	5,698	.131460522	Root MSE	=	.361

Pill	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
MEDICAID	-.0853493	.0119839	-7.12	0.000	-.1088423	-.0618563
_cons	.1726315	.0053422	32.31	0.000	.1621588	.1831042

```
. regress LARC MEDICAID [aw=WGT2013_2015]
(sum of wgt is 61,491,766)
```

Source	SS	df	MS	Number of obs	=	5,699
				F(1, 5697)	=	3.29
Model	.267485131	1	.267485131	Prob > F	=	0.0697
Residual	462.884815	5,697	.081250626	R-squared	=	0.0006
				Adj R-squared	=	0.0004
Total	463.1523	5,698	.08128331	Root MSE	=	.28504

LARC	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
MEDICAID	.0171687	.0094624	1.81	0.070	-.0013812	.0357186
_cons	.0858195	.0042181	20.35	0.000	.0775503	.0940887

4.

	2011-2013		2013-2015	
	Pill	LARC	Pill	LARC
MEDICAID	0.049***	-0.019*	-0.045**	0.012
	(0.014)	(0.01)	(0.011)	(0.011)
No High School	0	0	0	0
High School Graduate	0.006	0.017	0.027*	0.01
	(0.014)	(0.01)	(0.014)	(0.011)
Some College/2-year degree	0.092***	0.008	0.015	0.006
	(0.015)	(0.011)	(0.015)	(0.012)
Bachelor's or above	0.071***	0.01	0.007	-0.014
	(0.016)	(0.011)	(0.015)	(0.012)
White	0	0	0	0
Black	0.058***	-0.026**	0.058***	-0.013
	(0.014)	(0.01)	(0.014)	(0.011)
Hispanic	0.048***	0.018*	0.062***	0.01
	(0.014)	(0.01)	(0.014)	(0.011)
Average income or above	0	0	0	0
Low-income	0.039***	0.01	-0.027*	-0.01
	(0.015)	(0.011)	(0.016)	(0.012)
Poor	0.051***	0.023***	0.064***	0.002
	(0.012)	(0.009)	(0.014)	(0.009)
_cons	0.171***	0.062***	0.203***	0.085***
	(0.013)	(0.01)	(0.014)	(0.011)
N	5601	5601	5699	5699
R-squared	0.036	0.004	0.026	0.005

Standard errors in parentheses
* p<0.10 **p<0.05
***p<0.01

5. . reg MEDICAID i.FPL_new i.AGER_new_enc i.RACE_new_enc [aw=WGT2011_2013]
(sum of wgt is 60,859,398.167917)

Source	SS	df	MS	Number of obs	=	5,599
				F(8, 5590)	=	133.42
Model	127.524724	8	15.9405904	Prob > F	=	0.0000
Residual	667.8516	5,590	.119472558	R-squared	=	0.1603
				Adj R-squared	=	0.1591
Total	795.376324	5,598	.14208223	Root MSE	=	.34565

MEDICAID	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
FPL_new						
Low-income	.0925322	.0142582	6.49	0.000	.0645806	.1204837
Poor	.2808918	.0106288	26.43	0.000	.2600552	.3017283
AGER_new_enc						
20-29	-.0674402	.0141405	-4.77	0.000	-.095161	-.0397194
30-39	-.0919156	.0142754	-6.44	0.000	-.1199009	-.0639302
40-44	-.1237326	.0163047	-7.59	0.000	-.1556961	-.0917691
RACE_new_enc						
Black	.0969137	.0135498	7.15	0.000	.0703509	.1234765
Hispanic	.030537	.0127097	2.40	0.016	.005621	.055453
Other	.0141256	.0187723	0.75	0.452	-.0226755	.0509266
_cons	.1083803	.0134214	8.08	0.000	.0820691	.1346915

. reg MEDICAID i.FPL_new i.AGER_new_enc i.RACE_new_enc [aw=WGT2013_2015]
(sum of wgt is 61,425,344.938826)

Source	SS	df	MS	Number of obs	=	5,698
				F(8, 5689)	=	168.61
Model	173.321	8	21.6651251	Prob > F	=	0.0000
Residual	730.995455	5,689	.128492785	R-squared	=	0.1917
				Adj R-squared	=	0.1905
Total	904.316456	5,697	.158735555	Root MSE	=	.35846

MEDICAID	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
FPL_new						
Low-income	.130709	.0154273	8.47	0.000	.1004657	.1609524
Poor	.3460275	.0107806	32.10	0.000	.3248935	.3671615
AGER_new_enc						
20-29	-.0571315	.0145979	-3.91	0.000	-.085749	-.0285141
30-39	-.0765879	.014753	-5.19	0.000	-.1055094	-.0476663
40-45	-.0864381	.0169434	-5.10	0.000	-.1196537	-.0532225
RACE_new_enc						
Black	.1002393	.0139845	7.17	0.000	.0728242	.1276543
Hispanic	-.00791	.0128374	-0.62	0.538	-.0330763	.0172563
Other	-.0367005	.0192148	-1.91	0.056	-.0743688	.0009678
_cons	.1069048	.0137256	7.79	0.000	.0799974	.1338122